natural or artificial in a rock formation. Sewage shall not be discharged into any river, stream, lake, pond, or similar watercourse or any tidal waters unless a license is first secured from the Department of Environmental Protection as provided by Title 38, R.S. 1964, Chapter 3, Section 413, as amended.

SEC. 3.4 PRIVIES, CHEMICAL TOILETS, ETC.

Human body wastes may be disposed of by depositing them in approved privies, chemical toilets, or such other installations acceptable to the Department as long as there are facilities available to handle the gray waste water.

SEC. 3.5 TREATMENT

Water borne sewage from bathrooms, kitchens, laundry fixtures and other household plumbing shall pass through a septic or other approved treatment tank prior to its discharge into the soil, except as provided in this code.

SEC. 3.6 RESPONSIBILITY

This disposal system installer is responsible for compliance with this Code.

SEC. 3.7 ABANDONED SYSTEMS

Abandoned treatment, storage and transfer facilities shall be disconnected from the building, pumped out and filled with earth.

SEC. 3.8 SOIL LOADING

The "Maine Guidelines for Septic Tank Sludge Disposal on the Land" (Miscellaneous Report 155 April 1974) published by the University of Maine shall be used as the guide in assessing a site's ability to receive and handle the nitrogen constituent of sewage.

SEC. 3.9 INSTALLATIONS

When there is insufficient lot area or improper soil condition for adequate sewage disposal for the building or land use proposed, and the LPI so finds, no permit shall be issued and no private sewage disposal system shall be installed. Where space or soil conditions are critical, no permit shall be issued until engineering data and test reports satisfactory to the LPI and the Department have been submitted and approved.

SEC. 3.10 ADDITIONAL REQUIREMENTS

Nothing contained in this Code shall be construed to prevent the Department from requiring compliance with higher requirements than those contained herein where such higher requirements are deemed essential by the Department to maintain a safe and sanitary condition.

SEC. 3.11 CESSPOOLS, DRY WELLS

No cesspools, pits or dry wells shall be used for sewage disposal unless first approved by the Department.

SEC. 3.12 SURFACE AND STORM WATER DISPOSAL

Surface and storm waters shall not be discharged into a private sewage disposal system. Surface and storm waters may be discharged separately into the soil.

SEC. 3.13 LARGE SYSTEMS

When a private sewage disposal system is proposed to handle a daily flow in excess of 2,000 gallons of sewage, as determined from Table 5-1 or when a commercial or self-service laundry is proposed, a plan prepared by a registered professional engineer shall be submitted to the Department for review and approval.

SEC. 3.14 EXISTING CONSTRUCTION

(a) No provision of this Code shall be deemed to require a change in any portion of a plumbing or drainage system or any other work regulated by this Code in or on an existing building or lot when such work was installed and is maintained in accordance with law in effect prior to the effective date of this Code, except when any such plumbing or drainage system or other work regulated by this Code is determined by the Department and/or Local Plumbing Inspector to be in fact dangerous, unsafe, unsanitary or a nuisance, and a menace to life, health or property.

(b) The Department may waive requirements of this Code if the following conditions are met: (1) the private sewage disposal system will serve either a pre-existing building whose sewage disposal system is required to be replaced or a pre-existing substandard size lot legally recorded prior to the effective date of this Code, and (2) all other alternatives are unacceptable and failure to waive the requirements would cause undue hardship.

Such waivers of requirements shall be supported by complete information as the Department may require. The Local Plumbing Inspector shall not approve such waivers without written approval of the Department.

SEC. 3.15 LOCATION

Except as otherwise provided in this code, no plumbing system, drainage system, building sewer, private sewage disposal system or parts thereof, shall be located in any lot other than the lot which is the site of the building, structure or premises served by such facilities.

CHAPTER 4

SITE CONSIDERATIONS

SEC. 4.1 SOIL CONDITIONS

Proposed sites for all private sewage disposal systems shall be explored, evaluated and reported on a form as provided for by the Department. Site investigation shall be made by a Maine State-Certified Soil Scientist or Geologist, a Registered Professional Engineer experienced in the field of soils engineering, or others recognized by the Department.

The site investigator's report, signed and sealed by him, shall indicate assessment of the suitability of the site and site's soils for sewage disposal and select the type and size of private sewage disposal system and any special design or construction details needed to assure that the proposed installations will meet the criteria of this Code. Soils shall be identified by strata and described by methods in Table 9-1. Example: a site's soils are — Deep silty (< 15% sand < 35% clay), with seasonal groundwater at 36" — identify soil as GROUP 7/CONDITION C.

The findings shall be supported with:

1. a location plan
2. log of all soil exploration
3. a description of the various soils by strata
4. slopes
5. depth to bedrock
6. depth to any dense firm sublayer (fragipan, hardpan, iron pan, etc.)
7. groundwater conditions (including indications of seasonal groundwater fluctuations)
8. the amount and type of fill if required
9. type and size of system selected or designed
10. specifications for any special equipment which might be required
11. distances to all surface waters, wells, springs, etc. within 300 feet of the proposed disposal area.

Soils Scientists shall also describe the site soils in accordance with the standards of the National Cooperative Soil Survey.

SEC. 4.2 OBSERVATION HOLES

Observation holes (pits or borings) to a depth of five (5) feet, to refusal, to impervious strata, or to the groundwater table, shall be dug at representative points within the proposed subsurface absorption area. The report of the test shall indicate the slope, soil characteristic by strata, maximum groundwater elevation, presence of bedrock or impervious strata, and the nature of bedrock if within five (5) feet of the surface of the ground. The minimum diameter of the borings shall be four (4) inches. The number of soil investigation pits or borings required shall depend upon the estimated daily sewage flow and soil conditions. Refer to Table 5-1 for sewage volume guidelines.

TABLE 4-1

Number of Soil Investigation Pits or Borings		
Daily Volume of Sewage	Less than 500 gallons	for each additional 500 gallons
Number of Pits Required	1	1
	and/or	and/or
Number of Borings Required	5	2

SEC. 4.3 GROUNDWATER, BEDROCK, IMPERVIOUS STRATA

Sites where the highest seasonal groundwater table, (mottling) bedrock, or impervious layer is less than 15 inches below the bottom of the organic (0) horizon, shall not be used for subsurface absorption areas. There shall be at least 24 inches or suitable soil between the bottom of the subsurface absorption area excavation and the seasonal high water table, bedrock, and/or impervious layer (See Sections 9.6-9.13).

SEC. 4.4 SURFACE WATER

The ground surface of the disposal area and the land adjacent to the disposal area shall be sloped to prevent the accumulation of surface water and to prevent erosion. Provisions shall be made to minimize the flow of surface water over the disposal area.

SEC. 4.5 FLOOD PLAIN

Private sewage disposal systems shall not be constructed in any 10 year flood plain of any body of water and/or water course.

SEC. 4.6 GROUND SLOPE

Subsurface absorption areas shall not be installed in ground having an original surface slope greater than 15 percent (15 foot vertical to 100 feet horizontal). The bottom of the subsurface absorption area shall be constructed level within the tolerance of 0.5 percent.

SEC. 4.7 LOCATION OF DISPOSAL FACILITIES — The location of the disposal facilities shall be such as to provide between it and the components listed in the following table not less than the distance stated:

TABLE 4-2

COMPONENTS	Daily sewage flow less than 2,000 gallons.		Daily sewage flow in excess of 2,000 gallons.		Building sewer
	Treatment Tank	Subsurface Absorption Area	Treatment Tank	Subsurface Absorption Area	
	FEET	FEET	FEET	FEET	FEET
Property line	10	10	20	20	—
Buildings	8	20	20	40	—
Normal high water mark of any swamp, marsh, bog, lake, pond, river, stream or similar perennial watercourse	100*	100	100*	300	100**
Intermittent stream	50*	50	50*	150	50**
Drainage ditch	25	25	25	75	25
Tidal water (mean hightide)	100*	100	100	100	60**
Well or spring used as a domestic water supply	100	100	100	300	100**
Well or spring used as a domestic water supply with a daily water use in excess of 2,000 gallons	100	300	100	300	100**
Water supplyline	10	10	10	25	10***
Downhill slope steeper than: one vertical to three horizontal (33%)	—	50	—	50	—

FOOTNOTE: *One and two family dwelling septic tank, or any other treatment tank or similar receptacle directly receiving sewage for the purpose of pumping or transporting it to an approved disposal area shall be at least 25 feet from the normal high water mark of any lake, pond, river, stream, similar intermittent watercourse or tidal water and the system shall be tested after installation and found water tight in the presence of a Local Plumbing Inspector.

**May be 25 feet providing the Building sewer is constructed of cast-iron, cement-asbestos, Schedule 40 PVC or ABS of standards listed under Chapter 6, Section 6.2 and the system shall be tested after installation and found water tight in the presence of the Local Plumbing Inspector.

***See Section 6.7.

CHAPTER 5

VOLUME OF SANITARY SEWAGE

SEC. 5.1 SINGLE FAMILY DWELLINGS

The estimated volume of sewage for single family dwellings is incorporated into the designs for the private sewage disposal systems permitted in Chapter 9.

SEC. 5.2 OTHER STRUCTURES

Each private sewage disposal system shall be designed to treat adequately the estimated volume of sewage to be discharged from the premises to be served. The estimated volume of sewage flow shall be determined using Table 5-1. If adequate documentated data is supplied, the Department may approve a reduction in the flows from Table 5-1.

TABLE 5-1

VOLUME OF SEWAGE FLOW

The volume of sewage flow shall be based on the estimated maximum contributary population and the resultant expected daily quantities of sewage, as determined from the following table:

	Gallons per person per day unless otherwise noted
Airports (per passenger)	5
Apartments-multiple unit housing (per bedroom)	120
Bath houses and swimming pools	10
Bowling Alleys (no food service)—per lane	75
Camps —	
Construction (at semi-permanent camps)	50
Recreational-washrooms and toilets only	25
Recreational-mess hall only	15
Resort camps (night and day)	50
Country clubs (per resident member)	100
Country clubs (per non-resident member present)	25
Dwellings: Minimum volume 300 gallons per unit	
Boarding houses	50
Luxury residences and estates	150
Multiple unit housing (per bedroom)	120
Rooming houses	40
Mobile Home (per unit)	300
Factories — no showers per employee	25
Factories — with showers per employee	35
Hospitals (per bed space)	200
Hotels (per unit)	100
Institutions other than hospital (per bed space)	100
Laundries, self-service (per machine)	400
Mobile Home parks (per space)	300
Motels (per unit)	100
Nursing and Rest Home	100

Public Park—toilet wastes only	5
Public Park with bathhouse, showers, and flush toilets	10
Restaurant:	
Ordinary restaurant—per seat	35
24 hour restaurant—per seat	50
Restaurant along freeway (24 hour) per seat	70
Tavern (very little food service) per seat	20
Curb service (drive-in) per car space	50
Schools:	
Boarding and Colleges	90
Day, toilet and lavatory only	10
Day, with cafeterias	15
Day, with cafeterias and showers	20
Service stations (excluding throughways) per island	500
Shopping Centers and retail stores (without food service or launderies) per 1,000 sq. ft.	100
Theaters:	
Movie (per auditorium seat)	5
Drive-in (per car space)	5
Travel trailer and Tenting area (per space)	100
Workers:	
Construction (at semi-permanent camps)	50
Day, at schools and offices (per shift)	15
Shopping Centers, (per shift)	15

OTHER FACILITIES NOT IN TABLE — CONTACT THE DIVISION OF HEALTH ENGINEERING

CHAPTER 6

BUILDING SEWER

SEC. 6.1 GENERAL

The building sewer shall consist of watertight piping and joints. Joints between this piping and other appurtances of the disposal system shall be semiflexible and watertight. The use of perforated pipe or its equivalent as a building sewer is prohibited. Solid, watertight piping shall be used up to the point where the subsurface absorption area begins.

SEC. 6.2 MATERIAL

(a) **PIPE** — The building sewer, beginning eight (8) feet from any building or structure, shall be of such materials as listed below, and said material shall be in compliance with the minimum standards listed.

cast iron pressure pipe	ASTM A377
cast iron soil pipe	ASTM A74
hubless cast iron soil pipe	ASTM C564
weld wrought iron pipe	ASTM C72
asbestos cement	ASTM C644, C296
bituminized fiber	ASTM D1861
vitrified clay	ASTM C200
concrete	ASTM C75, C14
PVC (Schedule 40)	ASTM D2665
ABS (Schedule 40)	ASTM D2661

(b) **FITTINGS** — Drainage fittings for the building sewer shall be of approved materials having a smooth interior waterway of the same diameter as the piping served and all such fittings shall conform to the type of pipe used.

SEC. 6.3 SIZE OF BUILDING SEWER

(a) **SINGLE FAMILY DWELLINGS** — The minimum size of the building sewer shall be four (4) inches leading to the treatment tank, unless otherwise approved elsewhere in this Code.

(b) **OTHER STRUCTURES** — The size of the building sewer shall be determined on the basis of the total number of fixture units drained by them in accordance with Tables 4-3, or B-3 of the State Plumbing Code, but in no case shall be less than four (4) inches unless otherwise approved elsewhere in this Code.

SEC. 6.4 GRADE OF THE BUILDING SEWER

The building sewer shall be run in practical alignment and at a uniform slope of not less than 1/8 inch per foot to the treatment tank, unless otherwise approved by the LPI.

SEC. 6.5 SUPPORT AND PROTECTION OF THE BUILDING SEWER

(a) **SUPPORT** — Building sewer piping shall be laid on a firm bed throughout its entire length, and any such piping laid in made or filled in ground shall be laid on a bed of approved materials and shall be adequately supported to the satisfaction of the LPI.

(b) **PASSING THROUGH WALLS** — All piping passing under or through walls shall be protected from breakage. All piping passing through or under cinders or other corrosive materials, shall be protected from external corrosion in an approved manner. Voids around piping passing through masonry floors on the ground shall be appropriately sealed.

(c) **PROTECTION** — All piping in connection with the drainage system shall be so installed that piping or connections will not be subject to undue strains or stresses, and provisions shall be made for expansion, contraction and structural settlement. No piping shall be directly embedded in concrete or masonry walls or footings.

(d) **UNDER BUILDINGS** — No building sewer or other drainage piping or part thereof, which is constructed of materials other than those approved for use under or within a building, shall be installed under or within two (2) feet of any building, or structure or part thereof, nor less than one (1) foot below the surface of the ground. The provisions of this subsection include structures such as porches and steps, whether covered or uncovered, breezeways, roofed portecocheres, roofed patios, covered walks, covered driveways and similar structures or appurtenances.

(e) **CORROSION** — Exposed piping subject to undue corrosion, erosion or mechanical damage shall be protected in an approved manner.

(f) **FREEZING** — No soil or waste pipe shall be installed unless adequate provision is made to protect such pipe from freezing.

SEC. 6.6 TRENCHING, EXCAVATION AND BACKFILL

(a) **PROHIBITED** — Use of mechanical excavating equipment is prohibited within two (2) feet of existing piping or appurtenances.

(b) **TUNNELING AND DRIVING** — Tunneling and driving may be done in yards, courts, or driveways of any building site. Where sufficient depth is available to permit, tunnels may be used between open cut trenches. Tunnels shall have a clear height of two (2) feet above the pipe and shall be limited in length to one-half (½) the depth of the trench, with a maximum length of eight (8) feet. When pipes are driven, the drive pipe shall be at least one (1) size larger than the pipe to be laid.

(c) **OPEN TRENCHES** — All excavations required to be made for the installation of a building-drainage system or any part thereof, within the walls of a building, shall be open trench work and shall be kept open until the piping has been inspected, tested and accepted.

(d) **BACKFILL** — All excavations shall be completely backfilled as soon after inspection as practicable. Adequate precaution shall be taken to insure proper compactness of backfill around piping without damage to such piping. Trenches shall be backfilled in thin layers to twelve (12) inches above the top of the piping with clean earth which shall not contain stones, boulders, cinderfill or other materials which would damage or break the piping or cause corrosive action. Mechanical devices such as bulldozers, graders, etc., may then be used to complete backfill to grade. Fill shall be properly compacted. Suitable precautions shall be taken to insure permanent stability for pipe laid in filled or made ground.

SEC. 6.7 WATER SERVICE PIPES

Water services pipes or any underground water pipes shall not be run or laid in the same trench with building drain or sewer, except as provided in this section.

The water service pipe may be placed in the same trench with such building drain and building sewer, provided both of the following conditions are met:

(a) The bottom of the water service pipe, at all points, shall be at least twelve (12) inches above the top of the sewer line. The water service pipe shall not run through the subsurface absorption area.

(b) The water service pipe shall be placed on a solid shelf excavated at one side of the common trench.

SEC. 6.8 CLEANOUTS

(a) **CHANGE IN DIRECTION** — Every change in alignment or grade in excess of twenty-two and one-half (22½) degrees in a building sewer shall be served by a cleanout, except that no cleanout shall be required for not to exceed one (1) forty-five (45) degree change of direction or one (1) forty-five (45) degree offset. The extension of buildings sewer cleanouts to grade is optional. When building sewers are located under buildings the cleanout requirements of Section 406, State Plumbing Code, shall apply.

(b) **INSTALLATION** — Each cleanout shall be installed so that it opens in a direction opposite to the flow of the soil or waste or at right angles thereto, and except in the case of "wye" branch and end-of-line cleanouts, vertically above the flow of the pipe.

(c) **UNDER CONCRETE OR ASPHALT** — Cleanouts installed under concrete or asphalt paving shall be made accessible by yard boxes, or extending flush with paving with approved materials and be adequately protected.

(d) **MANHOLES** — Approved manholes may be installed in lieu of cleanouts when first approved by the Department. The maximum distance between manholes shall not exceed 300 feet.

CHAPTER 7

TREATMENT AND HOLDING TANKS

SEC. 7.1 SEPTIC TANKS

(a) **CONSTRUCTION** — Septic tanks shall be constructed of corrosion-resistant materials and be of permanent construction. The cover of the tank shall be designed for a dead load of not less than 150 pounds per square foot and, if of concrete, should be reinforced and not less than 4 inches thick.

(b) **INLET INVERT** — The invert of the inlet pipe shall be located at least 3 inches above the invert of the outlet.

(c) **PIPE INLET AND OUTLET** — In lieu of baffles, submerged pipe inlets and outlets may be installed consisting of a cast-iron sanitary T with a short section of pipe to the required depth as indicated in Section below.

(d) **BAFFLES** — Where inlet and outlet baffles are used, they shall extend the full width of the tank and be located 6 to 8 inches from the walls. Such baffles shall extend at least 6 inches above the flow line, and have a 1-inch minimum vent space above. Inlet baffles shall extend at least 6-inches below the flow line and outlet baffles should extend 40 percent of the liquid depth below the flow line.

(e) **MANHOLES** — The inlet and outlet of the septic tank shall be provided with access holes. All compartments in multiple compartmented tanks shall be provided with a manhole. Manholes shall be at least 18 inch diameter and provided with covers which can be sealed watertight. Where removable slab covers are provided, manholes are not required.

(f) **MULTIPLE COMPARTMENTS** — In tanks having two compartments, the inlet compartment shall have a capacity of not less than one-half and not more than two-thirds of the total tank capacity. Tanks built with three or four equal compartments shall have total liquid capacity required for a single compartment tank.

(g) **GROUND WATER** — The invert of the outlet of a septic tank shall be above maximum ground water elevation.

SEC. 7.2 CAPACITIES OF SEPTIC TANKS

Septic tanks shall have the following minimum capacities:

(a) **SINGLE FAMILY DWELLING** — When serving single family dwelling units, septic tanks shall have capacities as shown below. Expansion attics shall be considered as additional bedrooms.

No. of Bedrooms	Gallons Capacity (Working
2 or less	750
3	900
4	1000
each additional bedroom added	250

(b) **OTHER STRUCTURES** — When serving other than single family dwellings, septic tank liquid working capacity shall be 1½ times the daily estimated flow from Table 5.1 up to flows of 1,500 gallons per day, but in no case shall the capacity be less than 750 gallons liquid working

capacity. Septic tank working capacity for flows over 1,500 gallons per day shall equal to 1,125 plus 0.75Q, where Q is equal to the flow in gallons per day.

SEC. 7.3 AEROBIC TANKS

(a) Aerobic treatment tanks bearing the endorsement of the National Sanitation Foundation's Standard 40 may be used in lieu of a septic tank. The size of the aerobic tank to be used shall be based on the National Sanitation Foundation's recommendations.

(b) **GROUND WATER** — The inverts of the inlet and outlet of an aerobic treatment tank shall be above maximum ground water elevation.

SEC. 7.4 VEHICULAR TRAFFIC

(a) **PRIVATE DRIVES** — For installations under driveways or otherwise subject to heavy loads, the treatment tank shall be capable of withstanding a H-20 wheel load of 20,000 pounds.

(b) **PARKING LOTS** — For installations under parking lots, highways, or saturated soils, the treatment tank shall be capable of withstanding a H-20 wheel load of 20,000 pounds.

SEC. 7.5 SATURATED CONDITIONS

In soils where the water table may rise above the half-way point on the treatment or holding tank, suitable means shall be provided to counteract buoyancy. Such means may be to place an additional concrete slab over the top of the tank, allowing for the access holes, or to provide suitable anchoring to pads placed under the tank.

SEC. 7.6 HOLDING TANKS

(a) **CONSTRUCTION** — Holding tanks shall be constructed of the same materials and to the same structural specifications as septic tanks. Access to holding tanks shall be the same as septic tanks. Refer to Section 7.1 (a & e).

(b) **INSTALLATION** — The holding tank, building sewer and building drain shall be water tight. The holding tank facilities shall be vented through the vent stack of the building the facilities serve unless deemed impractical by the LPI. When deemed impractical, the tank must be separately vented. Inverts of inlets to holding tanks shall be above maximum high groundwater table.

(c) **ALARM PROVISIONS** — An alarm device shall be provided on holding tanks. This device shall be located and adjusted to assure the tank is pumped before full.

(d) **NUMBER AND SIZE** — One holding tank of the working size indicated in Section 9.11, shall be installed. If more than one holding tank is installed, they shall be installed in series.

CHAPTER 8

DETAILS AND SPECIAL DESIGNS

SEC. 8.1 DOSING FACILITIES [SIPHONS OR PUMPS]

When a private sewage disposal system is designed to handle more than 2000 gallons of sewage per day, dosing shall be provided. An emergency overflow of the dosing chamber should not be permitted unless an indicator is provided. The indicator should show when the dosing chamber has flooded to the overflow level. Dosing facilities shall have sufficient capacity to distribute sewage equally to all parts of the disposal system. Sufficient capacity shall be considered as equivalent to 75% of the interior capacity of all subsurface pipes, solid and perforated, downstream from the dosing facility. For a 4 inch diameter pipe this is equal to ½ gallon per linear foot of pipe. When leaching chambers are proposed an additional 10 gallons per chamber shall be considered an adequate dose.

SEC. 8.2 VENTING OF DISPOSAL FIELDS

Disposal fields shall be vented when dosing or pumping facilities exist in any part of the private sewage disposal system. Where required, vents shall be placed at the downstream ends of percolation pipes or leaching chambers and shall be at least two (2) inches in diameter. Provisions shall be made to vent all percolation lines; a common manifold may be used for this purpose. When a manifold is used, at least two (2) vents shall be provided on the disposal area. Vents shall extend at least three (3) feet above finished grade of the highest point in the disposal field.

Vents shall be screened to prevent entry of foreign objects greater than ¼ inch in diameter. Screens shall be adequately secured. Vents shall be rigidly held in place.

SEC. 8.3 VEHICULAR TRAFFIC AND PAVED AREAS

Disposal areas consisting of trenches, beds, or mounds shall not be paved over or placed in locations where vehicles will drive over them or park on them. Leaching chambers may be paved over or located in situations described above if designed for an H-20 load of 20,000 pounds.

SEC. 8.4 PERCOLATION LINES

(a) **PERFORATED DISPOSAL PIPE**

(1) **SIZE** — Perforated disposal pipe shall have a minimum diameter of four inches, unless otherwise approved by the Department.

(2) **GRADE** — Perforated disposal pipe shall be laid true to line and grade not to exceed a slope of two (2) inches in one hundred (100) feet.

(3) **MATERIALS** — Perforated disposal pipe shall be of such material and shall be in compliance with the specifications listed below, unless otherwise prohibited by this Code.

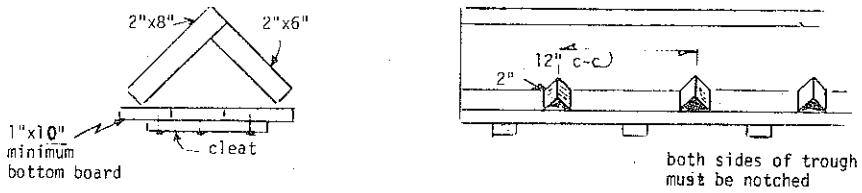
Material	Minimum Wall Thickness		Standards
	4"	6"	
Corregated Polyethylene	.075	.10	ASTM D 2852-72
Styrene	.075	.10	or
PVC	.075	.10	CS 228-61

If perforations have a diameter of ½ inch; pairs of holes must be spaced not more than 4½ inches on centers. Smaller perforations are not approved. If perforations are 5/8 inch in diameter, pairs of holes shall be spaced not more than 7 inches on centers. Pairs of holes shall span the bottom 90 degrees to 120 degrees of arc.

(b) **INVERTED WOODEN VEE PLANK** - Inverted wooden vee plank trough shall consist of one 2 inch by 8 inch, one 2 inch by 6 inch, and one 1 inch by 10 (minimum) inch boards. The planks shall have notches two (2) inches wide and two (2) inches deep and spaced twelve (12) inches apart. The wood shall be treated with tar or creosote. The bottom boards shall provide a smooth waterway the full length of the trough. Transverse cleats nailed to the planks shall be under the bottom boards. Refer to figure 8-1 for construction details.

Figure 8-1

Inverted Wooden Vee Plank Construction Details



(c) **AGRICULTURAL TILE** - Agricultural tile shall be laid on grade boards securely nailed to stakes driven into the undisturbed earth forming the trench bottom. Openings between agricultural tile joints shall be ¼ to ½ inches with the upper half of the joint covered with asphalt treated paper not less than three inches wide or by other acceptable methods.

SEC. 8.5 DIVERSION BOXES

(a) **DESIGN** — Diversion boxes shall have one or more influent lines and at least two effluent lines. Diversion boxes shall be designed so that only one-half the effluent lines can be used at any one time.

(b) **CONSTRUCTION AND MATERIAL** - Diversion boxes shall be constructed of the same materials as permitted for treatment tanks, and the cover shall be of concrete, metal or stone.

(c) **INVERT ELEVATIONS** - The inverts of outlets of the diversion box shall be rigidly set at the same level and approximately two (2) inches lower than the inverts of the inlets. The inverts of the outlets shall be above the seasonal high groundwater level.

(d) **ACCESS** - Diversion boxes shall have at least one access hole in their tops. The access hole shall be at least one hundred (100) square inches, with one dimension at least 8 inches and shall be sealed in a manner that will prevent the entrance of surface water.

SEC 8.6 DISTRIBUTION BOXES

(a) **DESIGN** - Distribution boxes shall have one or more influent lines and at least two effluent lines. Distribution boxes shall be installed so that two or more disposal lines are used simultaneously.

(b) **CONSTRUCTION AND MATERIALS** - Distribution boxes shall be constructed of the same materials as permitted for treatment tanks and the cover shall be concrete, metal or stone.

(c) **INVERT ELEVATIONS** - The inverts of outlets of the distribution boxes shall be rigidly set at the same level and approximately two (2) inches lower than the invert of the inlet. The inverts of the outlets shall be above the seasonal high groundwater table.

(d) **ACCESS** - Distribution boxes shall have at least one access hole in their tops. The access hole shall be at least one hundred (100) square inches, with one dimension at least 8 inches and be sealed in a manner that will prevent the entrance of surface water.

SEC. 8.7 MAN-MADE AREAS

(a) **SIZING OF SYSTEM TO BE INSTALLED IN FILL** - A system installed in fill shall be sized on the basis of the permeability and other characteristics of the original ground upon which the fill is placed.

(b) **SIZE OF AREA TO BE FILLED** - The size of filled area shall conform to either of the following requirements.

(1) The fill shall extend out level in all directions for five (5) feet from the edge of the subsurface absorption area and then slope off at 10 percent or less to the original surface.

or

(2) The fill shall extend out level in all directions for twenty-five (25) feet from the edge of the subsurface absorption area and then slope off at not more than 33 percent to the original surface.

(c) **HIGH GROUND WATER** - Subsurface absorption areas shall not be placed in filled land where the seasonal high water table is less than 15 inches below the organic (0) horizon.

(d) **BEDROCK and/or IMPERVIOUS LAYER** - Subsurface absorption areas shall not be placed in filled land where the bedrock and/or impervious layer is less than 15 inches below the organic (0) horizon of the original surface.

(e) The surface of the fill area shall be sloped to divert precipitation and surface run-off. See Sec 4.4.

SEC. 8.8 SUBSURFACE ABSORPTION AREA MATERIAL

The material used in the construction of subsurface disposal trenches, beds, leaching chambers, or mound systems shall consist of:

(a) **STONE** - The stones shall be free of fines, dust, ashes, or clay.

(b) **SAND** - Clean coarse sand, containing no clays or organic materials, and ranging in size from 0.42 mm to 4.78 mm (approximately 1/64 inch to 3/16 inch.